Study of the absorption length effect on the light signal response

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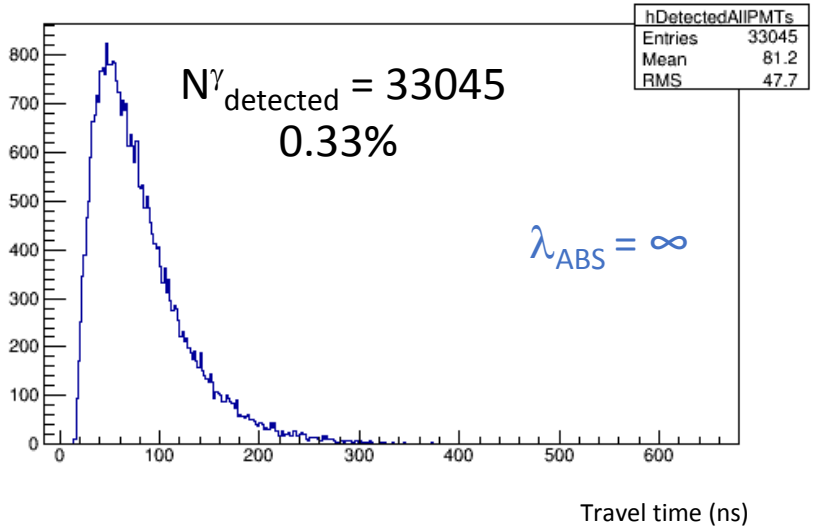
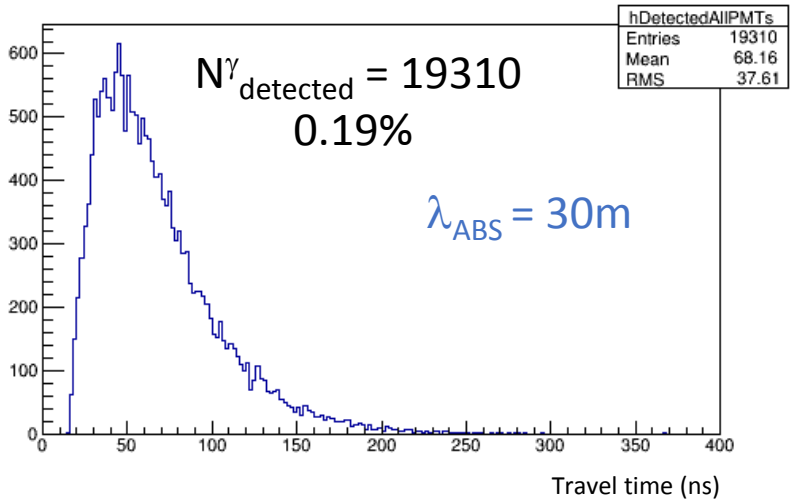
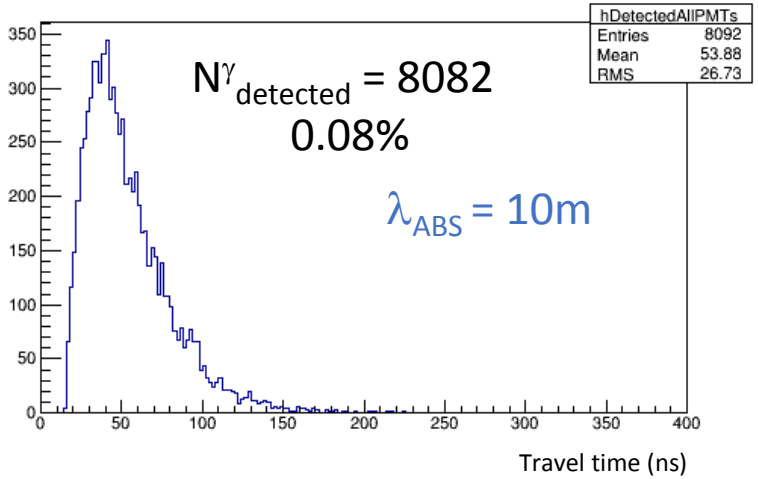
WA105 meeting – 27 Jul 2016

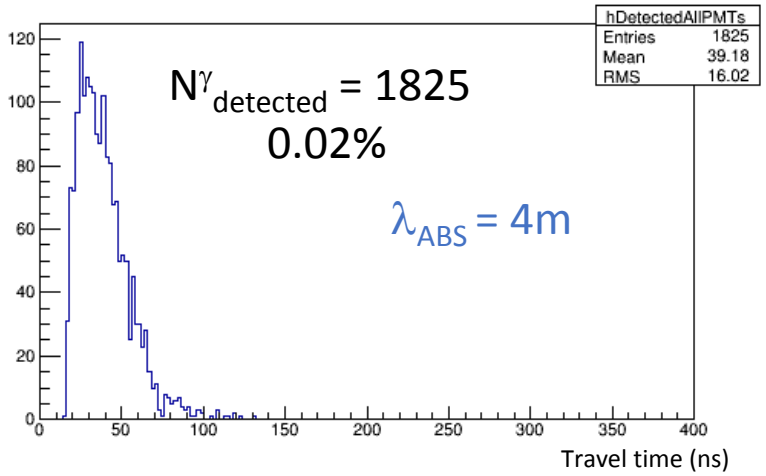
Check of results presented at the SB meeting 6 jul 2016

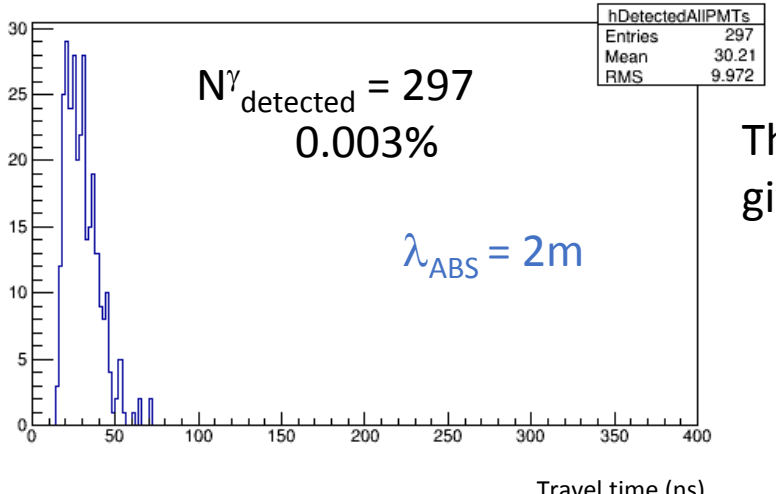
Using more high statistics : 10^7 photons generated at detector center in X=0, Y=0, Z=0





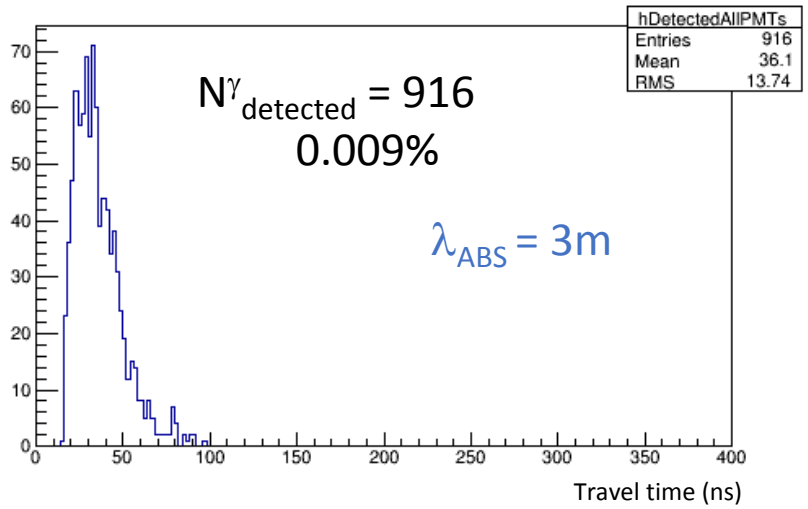


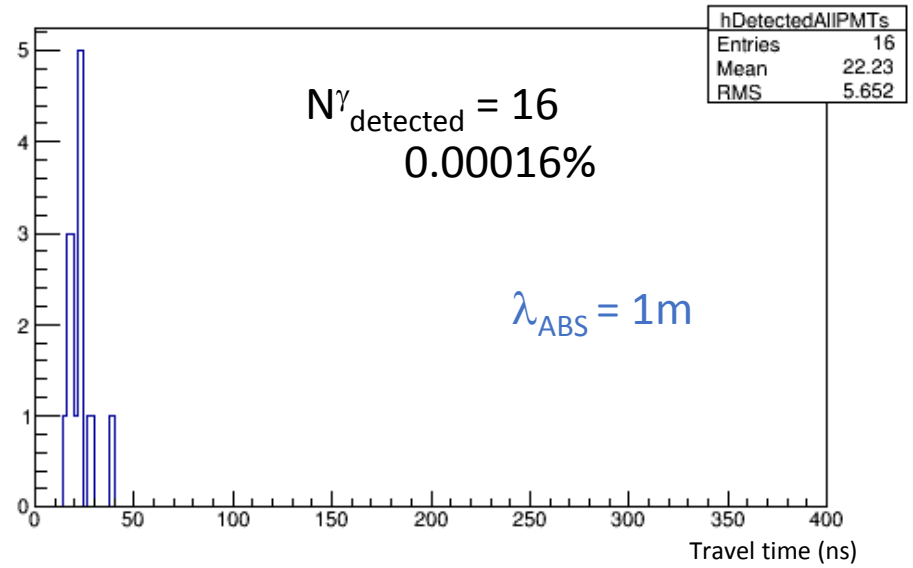


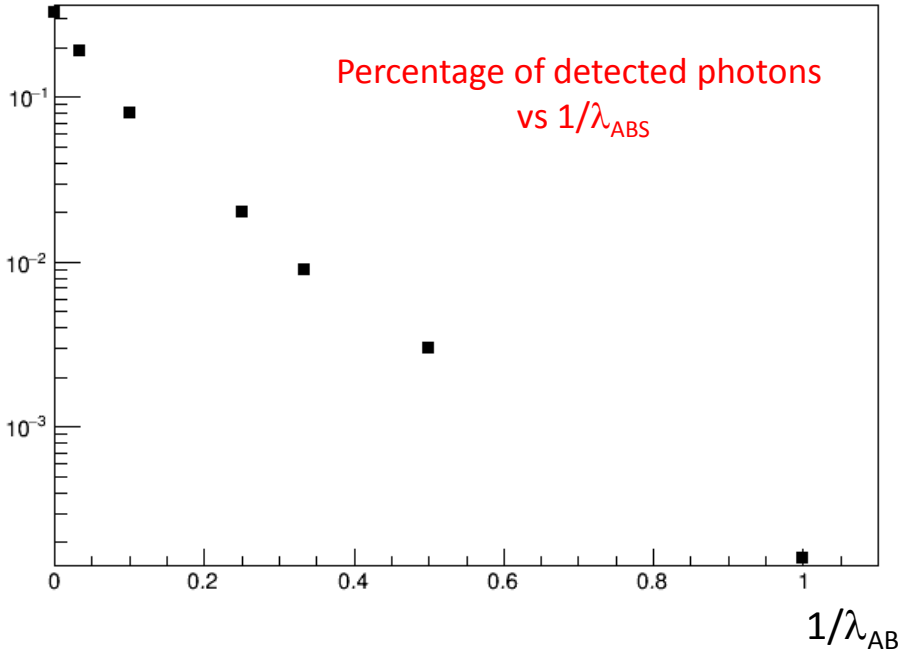


The results obtained are the same as the one given during the SB meeting 6 jul 2016

New results are obtained for λ_{ABS} = 3m and λ_{ABS} = 1m







	Percentage of detected photons with Rayleigh scattering	Percentage of detected photons without Rayleigh scattering
λ_{ABS} = 10 m	0.08%	0.15%
λ_{ABS} = 4 m	0.02%	0.08%
λ_{ABS} = 3 m	0.009%	-
λ_{ABS} = 2 m	0.003%	0.03%
λ_{ABS} = 1 m	0.00016%	